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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/267,362 03/15/99 NITTA J 35.62360

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EXAMINER

INZIRILLO, G

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 03/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/267,362

Applicant(s)

NITTA, JUN

Examiner

Gioacchino Inzirillo

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1, 2, 3, 4, 5, 6, 10, 11, 12, 13, 14, 15, 19, 20, 21, 22 and 23 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Uchida et al. U.S. 6,075,799.

3. **Regarding claims 1, 2, 6, 10, 11 15**, Fig. 46 of Uchida shows a DFB laser, which has regions defined by the pitch of grating 3207, similar to the present invention. See column 28 lines 7 – 11. He also has a phase controlling region, as does the region defined by the gratings, have a waveguide, see layer 3204a and 3204b. The phase control region is described in column 29 lines 49 – 58 as having a variable index of refraction. Since the Uchida reference contains the structure defined by the limitations, the light enlarging limitation must be inherent, just as the limitation of the coupling coefficients must also be inherent.

4. **Regarding claims 3, 4, 5, 12, 13 and 14**, see the electrode structure of Fig. 46 and the description in the specification.

5. **Regarding claim 19, 20 and 22**, see column 29 lines 46 – 63. Therein is described the claim limitations regarding the phase, (optical length) wavelength and adjustability of refractive index with voltage control.

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6. **Regarding claim²¹ 22**, see column 1 lines 10 – 12.

Claim Rejections - 35 USC § 103

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 8, 9, 17, 18, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida as applied to claims 1 – 6, 10 – 15 and 19 – 23 above.

9. **Regarding claims 23 and 24**, As was stated above, Uchida clearly discloses the claimed invention. The examiner is taking official position that it would be obvious to one of ordinary skill in the art to use this laser in a communications system, as described in the claim limitations or otherwise, or in any system in which is could prove useful. Lasers are in fact used in many communications systems; many such as the Uchida laser are designed for communications systems. See Uchida column 9 lines 10 – 24 where he discusses its use in a communications system. WDMs communications systems, utilization of the Uchida device in one would be obvious to one of ordinary skill in the art.

10. **Regarding claims 8, 9, 17 and 18**, the examiner is taking official notice that use of AR coatings would be obvious to one of ordinary skill in the art.

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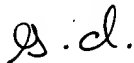
11. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida as applied to claims 1 – 6, 10 – 15 and 19 – 23 above, and further in view of Scifres et al U.S. 4,063,189. Cleaved faces are well known and utilized to further output coupling, see column 1 lines 50 – 54, and would be obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gioacchino Inzirillo whose telephone number is 703-305-1967. The examiner can normally be reached on M-F 8:30AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa M Arroyo can be reached on 703-308-4782. The fax phone numbers for the organization where this application or proceeding is assigned are 709-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Gioacchino Inzirillo



Examiner
Art Unit 2881

Teresa M. Arroyo



Supervisory Patent Examiner
Art Unit 2881

TMA/gi
March 22, 2001